



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,484	06/01/2000	Bradley W. Smith	AAI-14085	8297

7590 03/08/2002

James D Erickson Manager  
ASP Patent Department  
Autoliv ASP Inc  
3350 Airport Road  
Ogden, UT 84405

EXAMINER

LUM, LEE S

ART UNIT

PAPER NUMBER

3611

DATE MAILED: 03/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/586,484

Applicant(s)

Smith, Bradley

Examiner

Lum, Lee S.

Art Unit

3611



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on Dec 18, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) 2-9, 11-19, and 21-26 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☒ Claim(s) 24 is/are allowed.

6) ☒ Claim(s) 2-9, 11-19, 21-23, 25, and 26 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirements.

## Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some\* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4

18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: \_\_\_\_\_

---

---

**DETAILED ACTION**

---

---

1. An Amendment was filed 12/18/01 in which Claims 25 and 26 were added, Claims 10 and 20 cancelled, and Claims 2-8, 11, 13 and 21-24 amended. Therefore, the Claims presented for examination are 2-9, 11-19 and 21-26.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-5 and 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 13, second paragraph, "the respective lengths" lacks antecedent basis. Also, the subsequent phrase "and the discharge treatment element" is unclear/redundant within the context of the preceding recitation.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3A. **Claims 7 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandler Jr et al 5482315.

Chandler discloses inflator 10 comprising  
elongated hollow tubular/arcuate member 50 with elongated supply of gas generant material (Col 2, lines 15-16), the member including gas orifices 46.

---

The patent discloses the member as having a length-to-diameter ratio greater than 10 (Col 1, lines 59-60, and Col 2, lines 45-46). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include a range of sizes for the member towards adaptation to different applications/vehicle dimensions.

**3B. Claims 9, 11-13, 15-19, 21, 23 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandler in view of Hamilton 6145876.

Re **Claim 9**, Chandler doesn't disclose an inflatable curtain airbag, while Hamilton shows this element 24 in Fig 7. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the inflator in several types of airbags to increase applicability.

Re **Claims 11, 13, 15-19, 21, 23 and 25**, Chandler doesn't disclose a deformable discharge element, while Hamilton shows elongated discharge element 100 which deforms to create spaced gas flow paths (Figs 6A-D). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this element to further minimize initial inflation pressure, thus minimize injury to the occupant from very abrupt inflation.

**3C. Claims 2, 4 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandler in view of Hamilton, and in further view of Walker et al 5845933.

Re **Claims 2 and 4**, the previous patents don't disclose the gas generant material as including annular-shaped grains, while Walker shows this arrangement in Fig 1 with grains 56. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this material as an alternate arrangement having two types of gas generant material for special applications.

---

Re **Claim 14**, Walker shows filter 52. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this element to capture some of the particulates of the material before entry into the airbag, thus minimizing damage to the same. This feature is well-known in the art.

3D. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chandler in view of Hamilton, and in further view of Sheng 6068290.

The previous patents don't disclose an ignition-enhancing material coated on the inner surfaces of the grains, while Sheng shows this feature in Col 3, last paragraph. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include an accelerator on the grains as another embodiment for specific applications.

3E. **Claims 5 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandler in view of Hamilton, and in further view of Armstrong III et al 5551724.

The previous patents do not disclose a diffuser comprising an expanded metal, while Armstrong shows this element in Col 11, lines 8-11. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this element in order to direct the outgoing gas towards the airbag, and treat it for particulates/undesired materials.

3F. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chandler in view of Hamilton, and in further view of Wilhelm 4158696.

The previous patents do not disclose that the grains react substantially simultaneously, while Wilhelm shows this characteristic in Col 3, last line, to the next column. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include a material which can be ignited substantially simultaneously to minimize the reaction time in which the airbag is inflated.

4. **Claim 24** is allowable.

---

5. RESPONSE TO REMARKS

Generally moot in light of amendments, and new art used. With respect to Walker, Sheng, Armstrong, Wilhelm, Examiner reiterates her rejections because the references disclose elements in the respective Claims.


6. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure, in addition to the art listed above, and on the IDSs filed 6/1/00 and 12/18/01: Taylor et al 6051158, Lindsey et al 5871228, 5743556, Haland et al 5788270, Rink et al 5547638, Hamilton et al 5541704, 4200615, Hock 5398966, Wilhelm 4158696, Jorgensen et al 4005876.

7. Communication with the Examiner and USPTO

Any inquiry concerning this communication should be directed to Ms. Lum at (703) 305-0232, 9-530, M-F. Her supervisor, Ms. Judy Swann, can be reached at (703) 306-4115.

Our fax number is (703) 308-2571. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer assistance at (703) 306-5771.

Ms. Lee S. Lum  
Examiner  
2/27/02

  
J. J. SWANN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600